§ 44011.6. Test for smoke emissions; Advisory committee; Regulation and inspection; Criteria for compliance; Penalties; Administrative hearing

(a) The use of a heavy-duty motor vehicle that emits excessive smoke is prohibited.

(b) (1) As expeditiously as possible, the state board shall develop a test for the detection of excessive smoke emissions from heavy-duty diesel motor vehicles that is feasible for use in an intermittent roadside inspection program. During the development of the test procedure, the state board shall cooperate with the Department of the California Highway Patrol in conducting roadside inspections.

(2) The state board may also specify visual or functional inspection procedures to determine the presence of tampering or defective emissions control systems in heavy-duty diesel or heavy-duty gasoline motor vehicles. However, visual or functional inspection procedures for heavy-duty gasoline motor vehicles shall not be more stringent than those prescribed for heavy-duty gasoline motor vehicles subject to biennial inspection pursuant to Section 44013.

(3) The chairperson of the state board shall appoint an ad hoc committee which shall include, but not be limited to, representatives of heavy-duty engine manufacturers, carriers of property for compensation using heavy-duty gasoline or diesel motor vehicles, and the Department of the California Highway Patrol. The advisory committee shall cooperate with the state board to develop a test procedure pursuant to this subdivision and shall advise the state board in developing regulations to implement test procedures and inspection of heavy-duty commercial motor vehicles.

(c) Any smoke testing procedures or smoke measuring equipment, including any meter that measures smoke opacity or density and any recorder that stores or records smoke opacity or density measurements, used to test for compliance with this section and regulations adopted pursuant to this section, shall produce consistent and repeatable results. The requirements of this subdivision shall be satisfied by the adoption of Society of Automotive Engineers recommended practice J1667, “Snap-Acceleration Smoke Test Procedures for Heavy-Duty Diesel Powered Vehicles.”

(d) (1) The smoke test standards and procedures adopted and implemented pursuant to this section shall be designed to ensure that no engine will fail the smoke test standards and procedures when the engine is in good operating condition and is adjusted to the manufacturer's specifications.

(2) In implementing this section, the state board shall adopt regulations that ensure that there will be no false failures or that ensure that the state board will remedy any false failures without any penalty to the vehicle owner.

(e) The state board shall enforce the prohibition against the use of heavy-duty motor vehicles that are determined to have excessive smoke emissions and shall enforce any regulation prohibiting the use of a heavy-duty motor vehicle determined to have other emissions-related defects, using the test procedure established pursuant to this section.

(f) The state board may issue a citation to the owner or operator for any vehicle in violation of this section. The regulations may require the operator of a vehicle to submit to a test procedure adopted pursuant to subdivision (b) and this subdivision, and may specify that refusal to so submit is an admission consisting proof of a violation, and shall require that, when a citation has been issued, the owner of a vehicle in violation of the regulations shall, within 45 days, correct every deficiency specified in the citation.

(g) The department may develop criteria for one or more classes of smog check stations capable of determining compliance with regulations adopted pursuant to this section and may authorize those stations to issue certificates of compliance to vehicles in compliance with the regulations. The department may contract for the operation of smog check stations for heavy-duty motor vehicles pursuant to this subdivision, and only heavy-duty motor vehicles may be inspected at those stations.

(h) In addition to the corrective action required by this section, the owner of the motor vehicle in violation of this section is subject to a civil penalty of not more than one thousand five hundred dollars ($1,500) per day for each day that the vehicle is in violation. The state board may adopt a schedule of reduced civil penalties to be applied in cases where violations are corrected in an expeditious manner. However, the schedule of reduced civil penalties shall not apply where there have been repeated incidents of emissions control system tampering. All civil penalties imposed pursuant to this subdivision shall be collected by the state board and deposited in the Vehicle Inspection and Repair Fund. Funds in the Vehicle Inspection and Repair Fund, when appropriated by the Legislature, shall be available to the state board and the Department of the California Highway Patrol for the conduct of intermittent

roadside inspections of heavy-duty motor vehicles pursuant to this section.

(i) Following the adoption of regulations pursuant to this section, the state board may commence inspecting heavy-duty motor vehicles. With the concurrence of the Department of the California Highway Patrol, these inspections may be conducted in conjunction with the safety and weight enforcement activities of the Department of the California Highway Patrol, or at other locations selected by the state board or the Department of the California Highway Patrol. Inspection locations may include private facilities where fleet vehicles are serviced or maintained. The state board and the Department of the California Highway Patrol may conduct these inspections either cooperatively or independently, and the state board may contract for assistance in the conduct of these inspections.

(j) The state board shall inform the Department of the California Highway Patrol whenever a vehicle owner cited pursuant to this section fails to take a required corrective action or to pay a civil penalty levied pursuant to subdivisions (h) and (k) in a timely manner. Following notice and opportunity for an administrative hearing pursuant to subdivision (n), the State board may request the Department of the California Highway Patrol to remove the vehicle from service and order the vehicle to be stored. Upon notification from the state board of payment of any civil penalties imposed under subdivision (h) and storage and related charges, the vehicle shall be released to the owner or designee. Upon release of the vehicle, the owner or designee shall correct every deficiency specified in any citation to that owner with respect to the vehicle.

(k) In addition to the corrective action required by subdivision (f), and in addition to the civil penalty imposed by subdivision (h), the owner of a motor vehicle cited by the state board pursuant to this section shall pay a penalty of three hundred dollars ($300) per citation; except that this penalty shall not apply to the first citation for any schoolbus. All civil penalties imposed pursuant to this subdivision shall be collected by the state board and deposited in the Diesel Emission Reduction Fund, which fund is hereby created. Funds in the Diesel Emission Reduction Fund, when appropriated by the Legislature, shall be available to the State Energy Resources Conservation and Development Commission for research, development, and demonstration programs undertaken pursuant to Section 25617 of the Public Resources Code.

(l) The state board shall adopt regulations that afford an owner cited under this section an opportunity for an administrative hearing consistant with, but not limited to all of the following: (1) any owner cited under this section may request an administrative hearing within 45 days following either personal receipt or certified mail receipt of the citation; (2)

if the owner fails to request an administrative hearing within 45 days, the citation shall be deemed a final order and not subject to review by any court or agency; (3) if the owner requests an administrative hearing and fails to seek review by administrative mandamus pursuant to Section 1094.5 of the Code of Civil Procedure within 60 days after the mailing of the administrative hearing decision, the decision shall be deemed a final order and not subject to review by any other court or agency; and (4) the 45-day period may be extended by the administrative hearing officer for good cause.

(m) Following exhaustion of the review procedures provided for in subdivision (l), the state board may apply to the Superior Court of Sacramento County for a judgment in the amunt of the civil penalty. The application, which shall include a certified copy of the final order of the administrative hearing officer, shall constitute a sufficient showing to warrant the issuance of the judgment.

Added Stats 1988 ch 1544 § 26. Amended Stats 1989 ch 940 § 2; Stats 1990 ch 1433 § 16 (SB 1874); Stats ch 578 § 1 (AB 584); Stats 1996 ch 292 § 1 (AB 1460). Amended Stats 2004 ch 644 § 21 (AB 2701).

HEALTH AND SAFETY CODE

§ 43701. Adoption of regulations; Emissions standards and procedures; Evidence that engine met federal standards at time of manufacture

(a) Not later than July 15, 1992, the state board, in consultation with the bureau and the review committee established pursuant to subdivision (a) of Section 44021, shall, after a public hearing, adopt regulations that require owners or operators of heavy-duty diesel motor vehicles perform regular inspections of their vehicles for excessive emissions of smoke. The inspection procedure, the frequency of inspections, the emission standards for smoke, and the actions the vehicle owner or operator is required to take to remedy excessive smoke emissions shall be specified by the state board. Those standards shall be developed in consultation with interested parties. The smoke standards adopted under this subdivision shall not be more stringent than those adopted under Chapter 5 (commencing with Section 44000).

(b) Not later than December 15, 1993, the state board shall, in consultation with the State Energy Resources Conservation and Development Commission, and after a public hearing, adopt regulations that require that heavy-duty diesel motor vehicles subject to subdivision (a) utilize emission control equipment and alternative fuels. The state board shall consider, but not be limited to, the use of cleaner burning diesel fuel, or other methods which will reduce gaseous and smoke emissions to the greatest extent feasible, taking into consideration the cost of compliance. The regulations shall provide that any significant modification of the engine necessary to meet these requirements shall be made during a regularly scheduled major maintenance or overhaul of the vehicle’s engine. If the state board requires the use of alternative fuels, it shall do so only to the extent those fuels are available.

(c) The state board shall adopt emissions standards and procedures for the qualification of any equipment used to meet the requirements of subdivision (b), and only qualified equipment shall be used.

(d) To the extent permissible under federal law, commencing January 1, 2006, the owner or operator of any commercial motor truck, as defined in Section 410 of the Vehicle Code, with a gross vehicle weight rating (GVWR) greater than 10,000 pounds that enters the state for purposes of operating in the state shall maintain and provide upon demand to enforcement authorities, evidence demonstrating that its engine met the

federal emission standards applicable to commercial heavy-duty engines for that engine’s model-year at the time it was manufactured, pursuant to the protocol and regulations developed and implemented pursuant to subdivision (e).

(3) The state board, not later than January 1, 2006, in consultation with the California Highway Patrol, shall develop, adopt, and implement regulations establishing an inspection protocol for determining whether the engine of a truck subject to the requirements of subdivision (d) met the federal emission standard applicable to heavy-duty engines for that engine’s model-year at the time it was manufactured.

Added Stats 1990 ch 1453 § 1 (SB 2330). Amended Stats 1992 ch 674 § 5 (SB 1792); Stats 1995 ch 91 § 88 (SB 975); Stats 2004 ch 873 § 2 (AB 1009), effective September 29, 2004.

References at the time of publication (see page vii):

Regulations: 13, CCR, sections 1956.2, 2180.1, 2181, 2184, 2186, 2190, 2191, 2192, 2193, 2194

The Regulations for the Heavy-Duty Smoke Inspection Program and Periodic Smoke Inspection Program Sections 2180-2194, Title 13, California Code of Regulations

Chapter 3.5. Heavy-Duty Diesel Smoke Emission Testing, and Heavy-Duty Vehicle Emission Control System Inspections

§ 2180. Applicability.

This chapter applies to all diesel-powered and gasoline-powered heavy-duty vehicles, including pre-1974 model-year vehicles, operating in the State of California.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

§ 2180.1. Definitions.

(a) The definitions of this section supplement and are governed by the definitions set forth in Chapter 2 (commencing with section 39010), Part 1, Division 26 of the Health and Safety Code. The following definitions shall govern the provisions of this chapter.

(1) “ARB post-repair inspection” means a repeat emission control system inspection, conducted by the Air Resources Board at an Air Resources Board-specified site, for the purpose of clearing a citation.

(2) “ARB post-repair test” means a repeat test, conducted by the Air Resources Board at an Air Resources Board-specified site, for the purpose of clearing a citation.

(3) “Basic penalty” means the civil penalty of $500 for a test procedure or emission control system inspection violation that is to be deposited in the Vehicle Inspection and Repair Fund.

(4) “Citation” means a legal notice issued by the Air Resources Board to the owner of a heavy-duty vehicle requiring the owner to repair the vehicle and to pay a civil penalty.

(5) “Defective” means a condition in which an emission control system or an emission control system component is malfunctioning due to age, wear, malmaintenance, or design defects.

(6) “Demonstration of correction” means the documents identified in section 2186(a) or successful completion of an ARB post-repair test or inspection.

(7) “Driver” has the same meaning as defined in California Vehicle Code section 305.

(8) “Emission control label” means the label required by the “California Motor Vehicle Emission Control Label Specifications”, incorporated by reference in 13 CCR, section 1965, or Title 40, Code of Federal Regulations (40 CFR), section 86.085-35 or 40 CFR Part 86, Subpart A.

(9) “Emission control system” means the pollution control components on an engine at the time its engine family is certified, including, but not limited to, the emission control label.

(10) “Executive Officer” means the Executive Officer of the Air Resources Board or his or her designee.

(11) “Fleet” means two (2) or more heavy-duty vehicles.

(12) “Heavy-duty vehicle” means a motor vehicle having a manufacturer’s maximum gross vehicle weight rating (GVWR) greater than 6,000 pounds, except passenger cars.

(13) “Inspection procedure” means the test procedure specified in section 2182 and the emission control system inspection specified in section 2183.

(14) “Inspection site” means an area including a random roadside location, a weigh station, or a fleet facility used for conducting the heavy-duty vehicle test procedure, emission control system inspection, or both.

(15) “Inspector” means an Air Resources Board employee with the duty of enforcing Health and Safety Code sections 43701(a) and 44011.6, and Title 13, CCR sections 2180 through 2194.

(16) “Issuance” means the act of mailing or personally delivering a citation to the owner.

(17) “Minimum penalty” means the $300 penalty that is to be deposited in the Diesel Emission Reduction Fund pursuant to Health and Safety Code section 44011.6(l).

(18) “Notice of Violation” means a legal notice issued to the owner of a heavy-duty vehicle powered by a pre-1991 model-year diesel engine with a measured smoke opacity exceeding 55 percent but not exceeding 69 percent, requiring the owner to repair the vehicle and submit a demonstration of correction.

(19) “Officer” means a uniformed member of the Department of the California Highway Patrol.

(20) “Opacity” means the percentage of light obstructed from passage through an exhaust smoke plume.

(21) “Owner” means either (A) the person registered as the owner of a vehicle by the California Department of Motor Vehicles (DMV), or its equivalent in another state, province, or country; or (B) a person shown by the registered owner to be legally responsible for the vehicle’s maintenance. The person identified as the owner on the registration document carried on the vehicle at the time a citation is issued shall be deemed the owner unless that person demonstrates that another person is the owner of the vehicle.

(22) “Removal from service” means the towing and storage of a vehicle under the auspices of the Department of the California Highway Patrol.

(23) “Repair facility” means any place where heavy-duty vehicles are repaired, rebuilt, reconditioned, or in any way maintained for the public at a charge, and fleet maintenance facilities.

(24) “SAE J1667” means Society of Automotive Engineers (SAE) Recommended Practice SAE J1667 “Snap-Acceleration Smoke Test Procedure for Heavy-Duty Diesel Powered Vehicles,” as issued February 1996 (“1996-02”), which is incorporated herein by reference.

(25) “Schoolbus” means the same as defined in California Vehicle Code section 545.

(26) “Smokemeter” means a detection device used to measure the opacity for smoke in percent opacity.

(27) “Tampered” means missing, modified, or disconnected.

(28) “Uncleared citation” means a citation for which demonstration of correction and, if required, payment of any civil penalty, has not been made.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Section 505, Vehicle Code.

§ 2181. Responsibilities of the Driver and Inspector During the Inspection Procedure.

(a) Driver of heavy-duty diesel-powered vehicle. The driver of a heavy-duty diesel-powered vehicle selected to undergo the inspection procedure shall do all of the following:

(1) Drive the vehicle to the inspection site upon direction of an officer.

(2) Perform the test procedure upon request by an inspector.

(3) Open the vehicle door so that the inspector can observe the driver depress the accelerator pedal.

(4) Permit an emission control system inspection upon the request of the inspector.

(5) Sign the citation or notice of violation to acknowledge its receipt and the smoke test report to acknowledge performance of the test procedure.

(b) Driver of heavy-duty gasoline-powered vehicle. The driver of a heavy-duty gasoline-powered vehicle selected to undergo the inspection shall:

(1) Drive the vehicle to the inspection site upon direction of an officer.

(2) Permit an emission control system inspection upon request of the inspector.

(3) Sign the citation to acknowledge its receipt.

(c) Inspector. The inspector in performing the inspection procedure shall do all of the following:

(1) Advise the driver that refusal to submit to the inspection procedure is a violation of these regulations.

(2) Obtain engine identification information from the vehicle when tested pursuant to section 2182 to determine which opacity standard specified in section 2182 applies.

(3) Except as otherwise provided in section 2181(c)(4), issue a copy of the citation to the driver of a vehicle that fails the test procedure or the emission control system inspection.

(4) Issue a copy of the notice of violation to the driver of a vehicle powered by a pre-1991 model-year diesel engine with a measured smoke opacity exceeding 55 percent but not exceeding 69 percent, except where a notice of violation or citation has been issued for the vehicle in the preceding 12 months.

(5) Issue a warning to the owner of a heavy-duty diesel-powered vehicle missing its emission control label that the label must be replaced and the engine number identification must be provided to the ARB within 30 days of written notification by the ARB, or it will be conclusively presumed in any subsequent smoke opacity test where the emission control label remains missing that the vehicle is subject to the 40 percent smoke opacity standard in section 2182(a)(1), unless at the time of the subsequent test it is plainly evident from a visual inspection that the vehicle is powered by a pre-1991 model-year engine.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Section 305, Vehicle Code.

§ 2182. **Heavy-Duty** Diesel Vehicle Smoke Opacity Standards and Test Procedures; Excessive Smoke

(a) Standards

(1) No heavy-duty vehicle powered by a 1991 or subsequent model-year diesel engine operating on the highways within the State of California shall exceed 40 percent smoke opacity when tested in accordance with this section unless its engine is exempted under subsection (c) or (d) below.

(2) No heavy-duty vehicle powered by a pre-1991 model-year diesel engine, operating on the highways within the State of California, shall exceed 55 percent smoke opacity when tested in accordance with this section unless its engine is exempted under subsection (c) or (d) below.

(b) Exemptions

(1) The Executive Officer shall exempt from subsections (a)(1) and (2) any engine family that is shown by the engine manufacturer to the satisfaction of the Executive Officer to exhibit smoke opacity greater than 40 percent or 55 percent respectively when in good operating condition and adjusted to the manufacturer's specifications. Such engine family(s) must comply with any technologically appropriate less stringent opacity standard identified by the Executive Officer based on a review of the data obtained from engines in good operating condition and adjusted to manufacturer's specifications.

(2) The Executive Officer shall exempt from subsections (a)(1) and (2) any 1991 and earlier model-year heavy-duty diesel engines that are equipped with carryover add-on aftermarket turbocharger kits approved by the ARB, and are shown by the kit or engine manufacturer to the satisfaction of the Executive Officer to exhibit smoke opacity greater than 40 percent or 55 percent respectively when in good operating condition and adjusted to the manufacturer's specifications. Such engines must

comply with any technologically appropriate less stringent opacity standard identified by the Executive Officer based on a review of the data obtained from engines in good operating condition and adjusted to manufacturer's specifications.

(3) Exemptions previously issued and in effect on January 1, 1996 shall remain in effect under the amendments to this section adopted on March 2, 1998 and effective on May 4, 1998.

(4) A manufacturer seeking an exemption under subsection (b) shall provide the ARB with the engine emissions data needed to exempt the engine family and determine technologically appropriate less stringent opacity standards.

(c) Effect of missing emission control label on applicable standard. When the owner of a heavy-duty diesel-powered vehicle receives written notification from the ARB that the emission control label was missing during an inspection, the owner must replace the emission control label and provide the engine number identification to the ARB within 30 days of receipt of the notification. If the owner fails to comply with this requirement, it will be conclusively presumed in any subsequent smoke opacity test where the emission control label remains missing that the vehicle is subject to the 40 percent smoke opacity standard in section 2182(a)(1), unless at the time of the subsequent test it is plainly evident from a visual inspection that the vehicle is powered by a pre-1991 model-year engine.

(d) Excessive smoke. A heavy-duty vehicle has excessive smoke if it fails to comply with the smoke opacity standard applicable under this section 2182.

(e) Test Procedures. For purposes of this chapter 3.5, smoke opacity shall be determined in accordance with SAE J1667.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

§ 2183. Inspection of the Emission Control System on a Heavy-Duty Vehicle

(a) Heavy-duty diesel-powered vehicles. The heavy-duty diesel-powered vehicle emission control components subject to inspection for tampered or defective conditions include, but are not limited to, the following:

(1) The engine governor.

(2) Any seals and/or covers protecting the air-fuel ratio adjustments.

(3) Any fuel injection pump seal and covers.

(4) The air cleaner and flow restriction indicator.

(5) The exhaust gas recirculation valve.

(6) The particulate matter trap system or catalytic converter system, including pipes and valves.

(7) Related hoses, connectors, brackets, and hardware for these components.

(8) Engine computer controls, related sensors, and actuators.

(9) Emission control label.

(10) Any other emissions-related components for a particular vehicle/engine as determined from the manufacturer’s specifications, emission control label, certification data, or published vehicle parts manuals.

(b) Heavy-duty gasoline-powered vehicles. The heavy-duty gasoline-powered vehicle emission control components subject to inspection for tampered or defective conditions, include, but are not limited to, the following:

(1) The air injection system.

(2) The positive crankcase ventilation system.

(3) The exhaust gas recirculation system.

(4) The catalytic converter, including pipes and valves.

(5) The evaporative emission control system.

(6) Related hoses, connectors, brackets, and hardware for these components.

(7) Engine computer controls, related sensors, and actuators.

(8) On-Board Diagnostic (OBD) systems for 1994 and subsequent model year vehicles, if so equipped.

(9) Emission control label.

(10) Any other emissions-related component for a particular vehicle/engine as determined from the manufacturer's specifications, emission control label, certification data, or published vehicle parts manuals.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

§ 2184. Refusal to Submit to Inspection Procedure.

The refusal by an owner or driver of a vehicle to submit to the test procedure in section 2182 or to the emission control system inspection in section 2183 constitutes a failure of the test procedure or inspection, unless the driver is cited by the California Highway Patrol for a violation of California Vehicle Code section 2813.

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Sections 305, 505, and 2813, Vehicle Code.

§ 2185. Civil Penalty Schedule.

(a) The owner of a heavy-duty vehicle that fails the test procedure or the emission controls system inspection, including by refusal to submit, is subject to the following penalty schedule:

(1) The owner of a vehicle, other than a school bus, that is cited for the first time pursuant to section 2182 or 2183 and for which demonstration of correction is provided and payment is made within 45

days from personal or certified mail receipt of the citation, shall pay the minimum penalty of $300.

(2) The owner of a vehicle that is cited for the first time pursuant to section 2184, or that is cited for the first time pursuant to sections 2182 or 2183 and for which demonstration of correction is not provided within 45 days from personal mail or certified mail receipt of the citation, shall provide demonstration of correction and pay the minimum penalty of $300 and the basic penalty of $500 for a total of $800. School buses are exempt from the $300 minimum penalty for the first violation only.

(3) The owner of a vehicle that is cited within 12 months from the issuance of the most recent citation for that vehicle shall within 45 days from personal or certified mail receipt of the current citation provide demonstration of correction and pay the penalty of $1,500 and the minimum penalty of $300 for a total of $1,800.

(b) (1) No citation shall be issued to the owner of a heavy-duty vehicle powered by a pre-1991 model-year diesel engine on the basis of a measured smoke opacity exceeding 55 percent but not exceeding 69 percent, unless:

(A) the owner fails to provide a demonstration of correction within 45 days from personal or certified mail receipt of the notice of violation, or

(B) a notice of violation or citation has been issued for the vehicle in the preceding 12 months.

(2) The owner of a vehicle that is the subject of a notice of violation and for which demonstration of correction is provided within 45 days from personal or certified mail receipt of the notice of violation shall not be subject to a penalty for the violation.

(3) The owner of a vehicle that is initially subject to a notice of violation, but is cited after a demonstration of correction is not provided within 45 days from personal or certified mail receipt of a notice of violation, shall be subject to the penalty in section 2185(a)(2).

(4) (A) Where a heavy-duty vehicle with a pre-1991 engine inspected in accordance with section 2181 has a measured opacity exceeding 55 percent but not exceeding 69 percent within 12 months of issuance of a notice of violation for which a demonstration of correction was timely provided within the applicable 45-day period, a citation shall be issued and the owner shall be subject to the penalty in section 2185(a)(2).

(B) Where a heavy-duty vehicle with a pre-1991 engine inspected in accordance with section 2181 has a measured opacity exceeding 55 percent but not exceeding 69 percent within 12 months of issuance of a notice of violation for which a demonstration of correction was not timely provided within the applicable 45-day period, a citation shall be issued and the owner shall be subject to the penalty in section 2185(a)(3).

(c) If a vehicle fails the test procedure or an emission control system inspection one year or more after the date of its most recent failure, the owner of that vehicle shall be subject to the penalty schedule in section 2185(a)(1) and (2).

(d) When a vehicle is cited after a bona fide change of ownership between non-related persons or entities, the new owner shall be subject to the penalty schedule in section 2185(a)(1) and (2) if the only citations issued for the vehicle within the previous 12 months were issued prior to the change of ownership to the new owner.

(e) An owner who has been cited twice or more for tampered emission controls on the same vehicle shall be subject to the penalty in section 2185(a)(3), notwithstanding section 2185(c).

NOTE: Authority Cited: Sections 39600, 39601, 43013, and 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Sections 305, 505, and 545, Vehicle Code.

§ 2186. Demonstration of Correction and Post-Repair Test or Inspection.

(a) The owner may demonstrate correction of the vehicle by submitting to the Air Resources Board the following documents:

(1) Where repairs are made at a repair facility, a repair receipt or a completed work order which contains the following information:

(A) Name, address, and phone number of the facility;

(B) Name of mechanic;

(C) Date of the repair;

(D) Description of component replacement(s), repair(s), and/or adjustment(s); and

(E) Itemized list of replaced component(s), including description of part, part number, and cost.

(2) Where the owner makes his or her own repairs outside of a repair facility,

(A) An itemized receipt for the parts used in the repair, and

(B) A statement identifying the date and nature of the repairs made.

(3) Where the citation or notice of violation was based on a failure to meet the opacity standard applicable under section 2182, a smoke test report from a subsequent test showing that the repaired vehicle passed the applicable section 2182 standard along with a statement to that effect made under penalty of perjury by the person who conducted the subsequent test.

(4) Where the citation was based on a failure to pass an emission control system inspection as specified in section 2183, a statement by a person, under penalty of perjury, that the person has reinspected any components identified in the citation as defective or tampered and has determined that these components are in good working order.

(b) In lieu of submitting the documents identified under section 2186(a), the owner may demonstrate correction of the vehicle by submitting it to an ARB post-repair test or an ARB post-repair inspection.

(c) The Air Resources Board shall require an ARB post-repair test or an ARB post-repair inspection whenever:

(1) a submitted repair receipt or work order does not comply with (a) above;

(2) a repair receipt or work order appears to be falsified; or

(3) a second and subsequent failures of the test procedure or an emission control system inspection on the vehicle occur within a one-year period.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code. Section 505, Vehicle Code.

§ 2187. Vehicles Removed from Service.

(a) Vehicles are subject to removal from service by the Department of the California Highway Patrol if requested by the Air Resources Board inspector, and if one or more uncleared citations exist at the time of inspection.

(b) Upon payment by cashier’s check or money order of all unpaid penalties for a vehicle that has been removed from service, the Air Resources Board shall provide the owner, or designee, a release form for presentation to the Department of the California Highway Patrol.

(c) The release of the vehicle shall be subject to the condition that it be repaired and post-repair tested or inspected within 15 days.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

§ 2188. Contesting a Citation.

The owner of a vehicle cited under these regulations may request a hearing pursuant to sections 60075.1 et seq., Title 17, California Code of Regulations.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 44011.6, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43013, 43018, and 44011.6, Health and Safety Code.

Chapter 3.6. Periodic Smoke Inspections of Heavy-Duty Diesel-Powered Vehicles

§ 2190. Vehicles Subject to the Periodic Smoke Inspection Requirements

These regulations shall be applicable, operative July 1, 1998, as follows:

(a) Except as provided in subsections (b), (c), (d), (e) and (f), the requirements of this chapter apply to all heavy-duty diesel-powered vehicles with gross vehicle weight ratings of greater than 6,000 pounds which operate on the streets or highways within the State of California.

(b) Heavy-duty diesel-powered vehicles which are not part of a fleet or are employed exclusively for personal use are excluded from the requirements of this chapter.

(c) Heavy-duty diesel-powered vehicles which are registered under the International Registration Plan as authorized by Article 4 (commencing with section 8050), Chapter 4, Division 3 of the Vehicle Code and which have established a base state other than California (non-California based vehicles) are excluded from the requirements of this chapter.

(d) Heavy-duty diesel-powered vehicles which operate in California under the terms of Interstate Reciprocity Agreements as authorized by Article 3 (commencing with section 8000), Chapter 4, Division 3 of the Vehicle Code and which belong to fleets that are not based in California are excluded from the requirements of this chapter.

(e) Heavy-duty diesel-powered vehicles operating in California under the terms of any other apportioned registration, reciprocity, or bilateral prorate registration agreement between California and other jurisdictions and which belong to fleets that are not based in California are excluded from the requirements of this chapter.

(f) Heavy-duty diesel-powered vehicles operating in California under short-term vehicle registrations or permits of 90 days or less (including but not limited to 90-day temporary registrations and 4-day permits under Vehicle Code section 4004) are excluded from the requirements of this chapter.

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.

§ 2191. Definitions.

(a) The definitions of this section supplement and are governed by the definitions set forth in Chapter 2 (commencing with Section 39010), Part 1, Division 26 of the Health and Safety Code. The provisions of this chapter shall also be governed by the definitions set forth in section 2180.1, Title 13, California Code Regulations including the following modifications:

(1) "Fleet" means any group of 2 or more heavy-duty diesel-powered vehicles which are owned or operated by the same agency or entity.

(2) "Test opacity" means the opacity of smoke from a vehicle when measured in accordance section 2193(e).

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.

§ 2192. Vehicle Inspection Responsibilities.

(a) The owner of a heavy-duty diesel-powered vehicle subject to the requirements of this chapter shall do all of the following:

(1) Test the vehicle for excessive smoke emissions periodically according to the inspection intervals specified in section 2193(a), (b), and (c).

(2) Measure the smoke emissions for each test using the test procedure specified in section 2193(e).

(3) Record the smoke test opacity levels and other required test information as specified in section 2194.

(4) Have the vehicle repaired if it exceeds the applicable smoke opacity standard specified in section 2193(e).

(5) Record the vehicle repair information as specified in section 2194.

(6) Conduct a post-repair smoke test to determine if the vehicle complies with the applicable smoke opacity standard.

(7) Record the post-repair smoke test results as specified in section 2194.

(8) If the vehicle does not comply with the applicable smoke opacity standard after the test required by section 2192(a)(7), make additional repairs to achieve compliance, and record the smoke test results as specified in section 2194.

(9) Keep the records specified in section 2194 for two years after the date of inspection.

(10) Permit an Air Resources Board inspector to review the inspection records specified in section 2194 at owner/operator designated fleet locations by appointment.

NOTE: Authority Cited. Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43016, 43018, 43701(a), and 44011.6, Health and Safety Code.

§ 2193. Smoke Opacity Inspection Intervals, Standards, and Test Procedures.

(a) Initial phase-in. Vehicles which are subject to the requirements of this chapter on the operative date of these regulations shall be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 pursuant to the applicable following schedule:

(1) Fleets of five or more vehicles subject to this chapter:

(A) At least 25 percent of the fleet’s vehicles within 180 calendar days of the effective date of these regulations;

(B) At least 50 percent of the fleet’s vehicles within 270 calendar days of the effective date of these regulations;

(C) At least 75 percent of the fleet’s vehicles within 365 calendar days of the effective date of these regulations; and,

(D) The fleet’s remaining vehicles no later than 455 calendar days after the effective date of these regulations.

(2) For fleets of 2 to 4 vehicles, at least one vehicle must be tested in the initial 180 day period, and in each subsequent 90 calendar day period, until all vehicles in the fleet have been tested.

(b) New fleets. Fleets which first become subject to the requirements of this chapter subsequent to the effective date of these regulations must be tested in accordance with section 2192 within the applicable time intervals reflected in subsection (a) above, beginning on the date the fleet becomes subject to these regulations.

(c) Annual testing. Once a vehicle subject to the requirements of this chapter has been tested in accordance with subsection (a) or (b), or has been acquired by a fleet owner after the effective date of these regulations, the vehicle must periodically be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 within 12 months of the previous test conducted under this section 2193.

(d) Exemption for vehicles powered by 1994 or subsequent model-year engines. Any heavy-duty vehicle powered by a 1994 or subsequent model-year engine is exempt from the testing requirements of this section until January 1 of the calendar year that is four years after the model year of the engine, and is to be treated as having been acquired by the owner on that January 1. For example, a 1995 model-year engine will be exempt until January 1, 1999.

(e) Smoke opacity standards and test procedures.

(1) Except as otherwise provided in subsection (e)(2) below, the smoke opacity standards and test procedures are those specified in section 2182, Title 13, California Code of Regulations.

(2) Prior to July 1, 1999, if a repair facility is not equipped with an operable SAE J1667 smokemeter, vehicles may be tested at the repair facility in accordance with the smoke opacity test procedures and opacity standards set forth in section (e)(3). These are the test procedures and opacity standards originally established for the heavy-duty diesel vehicle roadside inspection program in 1991.

(3) Optional smoke opacity test procedures and standards prior to July 1, 1999.

(A) Standards.

1. The maximum smoke opacity standard for a 1991 or subsequent model-year heavy-duty diesel-powered vehicle with a Federal peak smoke engine certification level of 35 percent peak opacity or less is 40 percent when tested in accordance with section 2193(e)(3)(B) and (C).

2. The maximum smoke opacity standard for any other heavy-duty diesel-powered vehicle is 55 percent when tested in accordance with section 2193(e)(3)(B) and (C).

3. The above standards do not apply to an engine exempted under section 2182(b).

(B) Equipment. The smoke opacity measurement equipment shall consist of a light extinction type smokemeter which includes an optical detection unit, a control/indicator unit, and a strip chart recorder.

1. The smokemeter shall comply with the specifications provided in the Society of Automotive Engineers (SAE) procedure J1243, "Diesel Emission Production Audit Test Procedure," May 1988, which is incorporated herein by reference, section 7.4 and shall be calibrated according to specifications in SAE procedure J1243, section 8.2.

2. The strip chart recorder shall comply with specifications in SAE procedure J1243, section 7.5, subsections 1-4 (May 1988).

(C) Procedure. The test procedure shall consist of preparation, preconditioning, and test phases:

1. In the preparation phase, the vehicle shall be placed at rest, the transmission shall be placed in neutral, and the vehicle wheels shall be properly restrained to prevent any rolling motion.

2. In the preconditioning phase, the vehicle shall be put through a snap-idle cycle two or more times until two successive measured

smoke levels are within ten (10) opacity percent of each other. The smokemeter shall be rechecked prior to the preconditioning sequence to determine that its zero and span setting are adjusted according to specifications in SAE procedure J1243, section 8.1 (May 1988).

3. In the test procedure phase, the vehicle shall be put through the snap-idle cycle three times.

4. The opacity shall be measured during the preconditioning and test phases with a smokemeter and shall be recorded continuously on the chart recorder during each snap-idle cycle. The maximum instantaneous value recorded by the chart recorder shall be the opacity reading.

5. The test opacity to determine the compliance with (A)1. and (A)2. above shall be the average of the two meter readings with the least difference in opacity values. If all three readings have successive equivalent differences between them, the test opacity shall be the average of the three readings.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43013, 43018, 43701(a), and 44011.6, Health and Safety Code.

§ 2194. Record Keeping Requirements.

(a) The owner of a vehicle subject to the requirements of this chapter shall record the following information when performing the smoke opacity testing:

(1) The brand name and model of the opacity meter.

(2) The brand name and model of the strip chart recorder, if an SAE J1243 type smoke meter is employed.

(3) The dates of last calibration of the opacity meter and chart recorder.

(4) The name of the smoke meter operator who conducted the test.

(5) The name and address of the contracted smoke test facility or vehicle repair facility that conducted the test (if applicable).

(6) The applicable smoke opacity standard for the tested vehicle.

(7) Vehicle identification number, vehicle's engine year, engine make, and engine model, and test date. Fleet-designated vehicle identification numbers are also acceptable.

(8) The initial smoke test opacity levels (for three successive test readings).

(9) An indication of whether the vehicle passed or failed the initial smoke test.

(10) The post-repair test date.

(11) The post-repair smoke test opacity levels (for three successive test readings).

(12) An indication of whether the vehicle passed or failed the post-repair smoke test.

(13) For vehicles that have failed the smoke test and have been repaired, the vehicle repair information specified in section 2186(a), Title 13, California Code of Regulations.

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.

COMMON CAUSES OF HIGH DIESEL SMOKE LEVELS:

Maintain your vehicles in accordance with manufacturers recommended maintenance schedules and repair procedures. Don't tamper with the fuel settings. Use only replacement parts, which meet manufacturer's specifications. High quality repairs and parts reduce fuel consumption, smoke problems, and downtime.

The following items are some of the more common causes of high levels:

- ✓ Maladjusted no – air pressure (Cummins)
- ✓ Maladjusted AFRC (CAT/Navistar)
- ✓ Maladjusted fuel rack (DDC and others)
- ✓ Defective or maladjusted puff limiter (Mack)
- ✓ Defective AFC plunger bellows (Cummins)
- ✓ Defective or maladjusted throttle delay (DDC)
- ✓ Restricted air filter
- ✓ Maladjusted injection timing
- ✓ Clogged, worn or mismatched injectors or nozzles
- ✓ Maladjusted or defective fuel injection pump
- ✓ Worn or incorrect fuel injector rocker arms and linkage parts
- ✓ Maladjusted valve lash
- ✓ Defective or maladjusted governor
- ✓ Low air box pressure
- ✓ Air manifold leaks
- ✓ Malfunctioning turbos and aftercoolers
- ✓ Poor fuel quality
- ✓ Improper driving gear

DIESEL SMOKE
DIAGNOSTIC INFORMATION

I. White Smoke

White Exhaust Smoke consists of a large number of particles of fuel oil larger than 1.0 microns in diameter. This indicates that the "Fuel is not Burning."

POSSIBLE CAUSE

1) faulty ignition pump
2) too high injectionpressure or faulty injection
3) improper grade/delivery of fuel
4) incorrect engine value timing
5) engine overheating or too cold, coolant entering combustion chamber and/or water in fuel
6) high exhaust back pressure

POSSIBLE REMEDY

1) set injection timing
2) check emission system operation
3) check fuel injection pump calibration
4) check injection nozzles
5) check fuel being used
6) check engine valve timing
7) check cooling system for overheating, head gasket leakage, and/or fuel tank and filters
8) check exhaust back pressure

II. Blue Smoke

Blue smoke consists of a large number of fuel oil particles about 0.5 microns in diameter or less. These particles are recondensed droplets of unburned fuel or incompletely burned fuel. This indicates that the engine burns excessive oil; and/or indication of "Lubricating Oil" being burned.

POSSIBLE CAUSE

1) engine crankcase oil level too high
2) wrong grade/type of fuel
3) oil level in air cleaner too high
4) air cleaner oil too light in viscosity
5) worn piston rings, valve guides or cylinders
6) turbocharger/blower defective

POSSIBLE REMEDY

1) check oil in crankcase and air cleaner
2) try another grade of fuel
3) perform compression test
4) check rings and/or valve seals
5) check turbocharger/blower

III. Black or Gray Smoke

Black or Gray Smoke consists of particles of carbon formed when fuel is heated in oxygen lean regions in the combustion chamber. Part of the fuel in the chamber is not being ignited or burned.

POSSIBLE CAUSE

1) faulty injection pump timing
2) too high injection pressure or faulty injection nozzles
3) clogged or damaged air intake filter
4) improper grade/delivery of fuel
5) incorrect engine valve timing
6) engine overheating
7) high exhaust back pressure
8) poor cylinder compression

POSSIBLE REMEDY

1) set injection pump timing
2) check emission system operation
3) check fuel injection pump
4) check injection nozzles
5) check fuel being used
6) check engine valve timing
7) check cooling system for overheating
8) check air intake filter
9) check exhaust back pressure
10) check compression

Source: DMC Inc., Placentia, California

GASOLINE SMOKE
DIAGNOSTIC INFORMATION

I. Black or Gray Smoke

Black or Gray Smoke consists of a large number of carbon particles that is found when the fuel is heated in oxygen lean regions in the combustion chamber. This is an indication that part of the fuel in the combustion chamber has not been ignited and/or indication of incomplete burning.

POSSIBLE CAUSE

1) clogged or damaged air intake filter
2) choke unloaded or controls malfunction
3) carburetor and/or choke malfunction
4) fuel injection system/electronic control/ECU malfunction
5) faulty injection nozzles
6) faulty ignition timing
7) ignition system malfunction
8) cooling system malfunction, engine too cold
9) intake manifold exhaust passage plugged
10) low cylinder compression
11) turbocharger controls malfunction and/or clogged air filter
12) emission system malfunction
13) high exhaust back pressure

Acceleration, may cause heavy black smoke on turbocharged engines.
Catalytic converters will have a strong sulfur odor.

POSSIBLE REMEDY

1) check air intake filter
2) check choke unloader and controls/intake manifold
3) check and/or repair carburetor
4) check fuel injection system and controls
5) perform tune-up
6) check cooling system
7) check exhaust system back pressure
8) check turbocharger controls and/or filter
9) check emission system
10) perform compression test

II. White Smoke

White Smoke consists of a large number of particles of coolant/water entering the combustion chamber and being vaporized.

POSSIBLE CAUSE

1) head gasket leaking
1) cylinder head or block cracked

POSSIBLE REMEDY

1) check compression
2) pressure test cooling system
3) test for combustion entering cooling system

III. Blue Smoke

Blue Smoke consists of recondensed droplets of unburned/incompletely burned oil which causes blue light to be scattered. This is an indication of excessive lubrication oil being burned.

POSSIBLE CAUSE

1) oil level too high or wrong viscosity
2) worn piston rings, valve guides or cylinder
3) leaking intake manifold gaskets
4) PCV system clogged
5) poor cylinder compression
6) turbocharger seals leaking
7) automatic transmission vacuum modulator defective

IV. External Engine Blue/Gray Smoke

Oil leaking onto the exhaust manifold or exhaust system will produce a light blue/gray smoke and will have an ordor of burning oil.

POSSIBLE CAUSE

1) engine seals or gaskets leaking
2) power steering seals or hoses leaking
3) transmission seals, gaskets or cooler lines leaking
4) PCV system clogged

POSSIBLE REMEDY

1) check all hydraulic systems
2) check/clean PCV system

V. External Engine White Smoke

POSSIBLE CAUSE

1) engine overheating (boiling)
2) coolant leaking onto hot engine or onto exhaust system

POSSIBLE REMEDY

1) check cooling system

CALIFORNIA AIR RESOURCES BOARD

HEAVY-DUTY VEHICLE INSPECTION PROGRAM

(HDVIP)

I. LEGISLATIVE MANDATE

Due to public health concerns associated with the exposure to smoke emissions from heavy-duty vehicles, Senate Bill (SB) 1997 was enacted in 1998 to provide for the creation of Heavy-Duty Vehicle Inspection Program (HDVIP). Senate Bill 1997 required the creation of an "ad hoc advisory committee" [1] and gave it the mandate to develop an effective inspection program to curtail excessive smoke emissions from malmaintained or tampered heavy-duty vehicles. The bill also required the California Highway Patrol (CHP) to assist the Air Resources Board (ARB) in administering the HDVIP.

Senate Bill 1997 also authorized the ARB to issue citations and civil penalties to vehicles failing the prescribed test procedures and required cited vehicle owners to promptly correct deficiencies specified in the citation. If the required corrective action is not taken, violators can be assessed civil penalties up to $1500 per day. An addition, pursuant to Assembly Bill 1107 of 1989, a $300 civil penalty is assessed with each issued citation. These additional civil penalties are required, by AB 1107, to be deposited into a special "Diesel Emission Reduction Fund" intended to support diesel fuel research undertaken by the California Energy Commission (CEC). If a cited vehicle owner fails to take corrective action or pay the civil penalties levied, the CHP may remove the vehicle from service until the necessary corrective action is taken and/or the civil penalties are paid.

To complement SB 1997, the Legislature in 1990 enacted SB 1874 to provide a vehicle owner with recourse to contest a citation through an administrative hearing process. In conformance with SB 1874, the ARB has developed appropriate regulations to govern the administrative hearing process. These provisions can be found in the California Code of Regulations, Title 17, Article 5, Sections 60075.1 through 60075.47. Further details of the hearing process can be found in Section IV "Administrative Hearings".

[1] The ad hoc advisory committee members consisted of representatives from the Air Resources Board (ARB), California Highway Patrol (CHP), South Coast Air Quality Management District (SCAQMD), heavy-duty vehicle engine manufactures (represented by the Engine Manufacturer's Association (EMA)), and heavy-duty vehicle operation/carriers represented by the California Trucking Association (CTA)).

The provisions of SB 1997 and AB 1107, pertaining to the HDVIP, may be found in section 44011.6 et seq. of the California Health and Safety Code. (Please refer to Section III of this booklet for a copy of the Health and Safety Code, section 44011.6).

II. HEAVY-DUTY VEHICLE INSPECTION PROGRAM NEED

Since a significant number of in-use heavy-duty vehicles are diesel-fueled, their impact cannot be ignored. The following discussion highlights this impact.

A. TRUCK EMISSIONS

There are approximately 550,000 heavy-duty diesel vehicles registered in California (estimate for 1998). They are projected to travel approximately 36 million miles per day (135 miles/day/vehicle on average) and to consume 6.3 million gallons of diesel fuel each year.

On average, those vehicles emit: 49.32 tons per day (tpd) of reactive organic gases (ROG), 469.21 tpd of oxides of nitrogen (NOx), 23.44 tpd of oxides of sulfur (SOx), and 31.05 tpd of particulate matter (PM). These vehicles also emit carbon monoxide (CO), carbon dioxide (CO_2), and miscellaneous toxic compounds such as benzene, aldehydes, 1.3 butadiene, and xylene. Overall, heavy-duty vehicles account for approximately 30% of the NOx and 65% of the PM emissions from total on-road vehicles.

Although somewhat difficult to quantify directly, excessive smoke emissions from diesel trucks are a major public concern. Not only is excessive smoke emissions an indicator of possible engine problems and incomplete fuel combustion it is a major public health and nuisance concern. Every year government agencies receive thousands of complaints regarding smoking trucks.

B. SPECIFIC POLLUTANTS

The pollutants of most concern, due to their detrimental effect on public health, the environment, and agriculture, are: carbon monoxide and carbon dioxide, sulfur and nitrogen oxides, hydrocarbons, toxic air contaminants, and particulates.

Carbon monoxide (CO) is an odorless gas that has numerous adverse public health effects. The most prevalent is its affect on displacing hemoglobin proteins in the bloodstream. This affect deprives oxygen to vital organs such as the brain. Exposure to high concentrations of CO can cause headaches, severe physiological distress, and even death under certain circumstances. Currently there are nine California cities which violate the federal CO standard.

Carbon dioxide (CO_2) is an odorless gas that has been identified as a "greenhouse" gas. Greenhouse gases are believed to contribute to global warming (i.e. the "greenhouse effect") which can affect global weather patterns.

Sulfur oxides (SO_x) and ***Nitrogen oxides (NO_x)*** are gaseous emissions which, when combined with moisture in the atmosphere, produce sulfuric and nitric acids. These acids are subsequently deposited in the environment via fog and rain. Acid rain and acid fog harms soil and water systems by altering their pH balance (i.e. causes excessive acidity). This pH imbalance damages California's agriculture, forests, and aquatic life. Many regions in California suffer from acid deposition exposure including the Lake Tahoe region and Yosemite National Park.

SO_x and NO_x are also responsible for sulfate and nitrate formation which reduces visibility and impairs respiration. NO_x enhances the formation of photochemical oxidants in sunlight as discussed below. NO_x and SO_x emissions are often associated with common brown haze observed in urban areas such as Los Angeles county, aggravated by surrounding mountains that contain these pollutants in an "air basin".

Reactive organic gases (ROG) and NO_x are gaseous emission which combine with sunlight in the atmosphere to form photochemical oxidants. A major oxidant is ozone, popularly known as Smog. Smog aggravates cardiovascular and respiratory systems and has been found to increase the incidence of bronchitis, emphysema, and cancer in various epidemiological (public health) studies.

Studies by the ARB and University of California have shown that smog exposure contributes to 80,000 deaths per year in California. In addition, due to high smog concentrations, outdoor exercise is canceled over 100 times per year for school children in the Los Angeles region.

Smog also harms vegetation by affecting respiration and photosynthesis and damaging leaves. These affects reduce the size, quality, yields of crops - in some instances plants can also die. Studies have also found that crops grown in the San Joaquin Valley (cotton, grapes, citrus, alfalfa, and tomatoes) are experiencing yield losses of 15-25% due to smog exposure. Annually, smog causes agricultural losses totaling over $300 million in California.

There are eleven California cities which exceed the federal ozone (smog) standard of 0.12 parts per million (ppm). The majority of California cities exceeds the more restrictive state ozone standard of 0.09 ppm. Over 50% of California's population is adversely affected by smog.

Toxic air contaminants (TAC) emissions pose a serious risk to public health, as well as diesel toxic air contaminants, such as benzene, have been found to contain numerous carcinogenic and mutagenic substances. The ARB is developing air toxic control measures on an on-going basis under the provisions of AB 1807 of 1983.

Particulate matter (PM) emissions are composed of very fine particles that can be readily inhaled and embedded in a person's respiratory system. Due to this tendency, particulate matter impairs a person's respiratory system and poses a serious threat to public health due to its carcinogenic and mutagenic toxic compounds. There are currently five areas in California which exceed the federal PM standard.

Particulate matter also adheres to the leaf surfaces of plants and impairs their ability to respire and photosynthesize. Particulate matter also contributes to poor visibility.

C. CAUSES of EXCESSIVE EMISSIONS

Engine malmaintenance and tampering are the primary causes of excessive diesel emissions - particularly smoke emissions. Examples of specific components or systems which are malmaintained or tampered are: fuel injection pump and seals, fuel injection timing, fuel injectors, smoke puff limiter, air filter, intercooler, turbocharger, exhaust gas recalculation valve, along with other internal engine components. Other causes of excessive diesel emissions are pressure leaks in the injection system or manifolds, excessive back pressure in the exhaust system, and fuel problems such as wrong fuel grade or water contamination.

D. CONTROLS METHODS

The primary means for controlling heavy-duty diesel engine emissions are:

1. **Technology-forcing emission standards.** Beginning with the 1991 model-year for transit bus engines and 1994 model-year for heavy-duty truck engines, heavy-duty engine manufacturers have been required to manufacture engines which meet a 5.0 grams per brake horsepower hour (g/bhp-hr) standard for NO_x and 0.1 g/bhp-hr standard for PM emissions. Beginning with the 1998 model-year, heavy-duty diesel engine manufacturers must meet a 4.0 g/bhp-hr standard for NO_x and a 2.0 g/bhp-hr (2.5 g/bhp-hr combined NO_x/ROG) NO_x standard in 2004. These standards lead to advanced engine designs, including: cylinder redesign and other internal engine modifications, turbocharger/supercharge redesign, intercooler applications, electronic fuel injection systems improvements, exhaust gas recirculation application, and catalytic trap oxidizer/particulate trap oxidizer development.

2. **Fuel regulations.** The ARB has implemented regulations that regulate the maximum allowable sulfur and aromatic hydrocarbon fraction of diesel fuel to 0.05% by weight and 10% by volume, respectively. Reductions in sulfur and aromatic hydrocarbon levels are expected to result in reductions of NO_x, SO_x, and PM emissions. Additionally, under the provisions of AB 1107 of 1989, further research is aimed at identifying additional means of reducing harmful emissions from diesel fuel combustion. Finally, heavy-duty engine manufacturers have introduced cleaner burning engines which operate on alternative fuels such as methanol, ethanol, natural gas (CNG/LPG), and liquefied petroleum gas (LPG).

3. **Inspection programs.** Inspection programs for in-use vehicles such as the HDVIP offer an effective means for identifying malmaintained or tampered heavy-duty vehicles. In recognition of this, other states, including Nevada, Colorado, Oregon, Arizona, and New Jersey, also operate heavy-duty vehicle inspection programs. With the standardization that the SAE J1667 smoke test procedures provides, the U.S. EPA to have a recommendation for other states to adopt similar programs such as the HDVIP in the future.

As it pertains to California, the legislature has mandated two additional inspection programs other than the HDVIP. First, the Periodic Smoke Inspection Program (PSIP) requires California based fleets to conduct annual self inspections. The PSIP complements the HDVIP and both share the same test and pass/fail criteria. More information on the PSIP can be found in this informational package.

Of particular note, however, the California legislature also provided for an additional inspection program that requires statewide law enforcement officials to issue citations to vehicles observed smoking for more than 10 seconds while in operation. The provisions for this program, commonly referred to as the "Vehicle Code Smoke Inspection Program", are found in Vehicle Code Section 27153.5[2]. The ARB does not administer this program.

III. HDVIP BACKGROUND

Since 1989, the ARB conducted numerous field studies in order to formulate an effective HDVIP. Through these studies, hundreds of vehicles were recruited and tested using various test methods. Many vehicles underwent extensive diagnostic and repair evaluations. Overall, three primary causes of excessive smoke emissions were identified. These are: improper transient air-fuel ratio control settings, fuel injection timing problems, and inadequate air intake (restricted air filters, etc.). These problems can generally be corrected for less than $500 per vehicle.

In addition, a smoke test procedure based on the rapid no-load accelerations (snap-accelerations) of the engine was found to be the most effective in determining excessive smoke emissions at roadside operations. During a snap-acceleration test the driver rapidly depresses the accelerator to the floorboard for a few seconds while the smoke is measured by an electronic smoke opacity meter. A smoke opacity meter monitors the smoke exiting the exhaust pipe.

[2] The Vehicle Code Smoke Inspection Program differs from the HDVIP program in that it features a visual ("Ringlemann") smoke emissions evaluation for the pass/fail evaluation. The visual readings are conducted while the vehicle is in operation. The smoke standards are either Ringlemann 1 or Ringlemann 2 - corresponding to 20% and 40% opacity, respectively.

The snap-acceleration test is a quicker and safer test to perform than other test methods. It is particularly well suited for roadside inspections and periodic smoke inspections at fleet facilities.

The most recent study occurred in the winter and spring of 1996/97. This study served to evaluate, through a special truck repair study, a revised snap-acceleration smoke test procedure sponsored by the Society of Automotive Engineers (SAE J1667)[3]. As intended, the SAE J1667 test procedure proved to be effective in identifying trucks with excessive smoke emissions. The ARB incorporated the SAE J1667 into the HDVIP at the December 1997 board hearing. The ARB subsequently resumed the HDVIP with the revised snap acceleration test procedure on June 1, 1998.

A. KEY ELEMENTS

Under the HDVIP, inspections are conducted at CHP inspection and weigh stations, at random roadside locations, and at fleets statewide. California, out-of-state, and out-of-country registered heavy-duty vehicles are all subject to the HDVIP. Diesel-fueled vehicles are inspected for excessive smoke emissions and tampering of emission control systems. Gasoline-fueled vehicles are subject to a tampering inspection only. All inspections are entered into ARB field computers allowing easy tracking of citations.

The smoke opacity standards are 40% for trucks and buses with 1991 and newer model-year engines and 55% for those with model-year engines older than 1991. Under this latter category, however, a Notice of Violation (NOV) is issued to vehicles with smoke opacity levels between 55% and 69%[4]. If these vehicles are repaired to below 55% within the allowable 45-day time period, a citation is not issued.

Civil penalties for failing the prescribe standards range from $800 for the first level citation (i.e. the initial citation) to $1800 for second and subsequent level citations. A first level citation penalty can

[3] The previous HDVIP snap-acceleration test procedure was incorporated onto the new SAE J1667 snap-acceleration test procedure by slightly revising the signal averaging characteristics of the previously required smoke meters and by incorporating correction factors for varying ambient conditions and altitude.

[4] Under this NOV concept, a citation is issued if the vehicle exhibited smoke emissions 70% or greater or if the vehicle is not repaired to a level below 55% when a NOV is issued.

be reduced $300 if the cited vehicle is repaired within a 45-day period and if the repair documentation and post repair smoke test is provided. If a citation is not cleared, the ARB may recommend that the CHP remove a vehicle from service. Once impounded, a vehicle will not be released until all outstanding penalties are paid. Once paid, the vehicle will then be released for repairs. In order to clear the citation, the vehicle must be repaired and submitted to a retest within 15 days from the date of its release.

B. BENEFITS and COST-EFFECTIVENESS

Based on recent studies, it is anticipated that the implementation of the HDVIP[5] will provide 12.24 tpd of NO_x reduction; 6.37 tpd of ROG reduction, and 5.24 tpd of PM reduction in 1999. In 2010, the projected reductions are 14.03 of NO_x reduction, 5.30 tpd of ROG reduction, and 3.19 tpd of PM reduction. In addition, it is estimated that the HDVIP will reduce the number of on-road, excessively smoking heavy-duty vehicles by 29,000 in 1999 and 38,000 by 2010. With the combined effects of both the HDVIP and PSIP, approximately 625,000 excessively smoking heavy-duty vehicles will be reduced from 1999 through 2010. These values are applicable to only California. Values for other states in the nation will differ.

Through the promotion of better maintenance practices, the trucking industry is expected to realize a fuel savings. In 1999 and 2010 it is estimated that 16.7 million gallons and 19.2 million gallons, respectively, of diesel fuel will be saved by the trucking industry. This represents a reduction of fuel consumption of 0.69% and 0.66% in 1999 and 2010, respectively.

The cost effectiveness of these reductions are estimated to be $1.12 per pound in 1999 and $1.05 per pound in 2010. These estimates compare favorably to alternative emission control programs which typically cost between $2.50 and $5.00 per pound of emissions reduced.

[5] Note, the emission reduction benefits outlinerd in this section also take into account the projected benefits of the companion program - Periodic Smoke Inspection Program. The cost effectiveness figures represent the combined cost effectiveness of both the HDVIP and PSIP.

IV. ADMINISTRATIVE HEARINGS

In order to provide a cited vehicle owner with the recourse to contest a citation in an expeditious manner, Senate Bill 1874 required the ARB to enact an administrative hearing appeals process. Through the enacted process, a cited vehicle owner must first request a hearing within 45 days of receiving a citation. The hearing is conducted by an independent, in-house, administrative law judge who has broad authority to take any action necessary for a full and fair adjudication of a contested citation. At the hearing the vehicle owner is given the opportunity to present his/her case and to cross-examine any witnesses. Pursuant to the enacted hearing regulations, if an owner does not request a hearing within forty-five days, the issued citation is final and not subject to review by any court or agency. If the owner requests a hearing, the decision rendered pursuant to the proposed rules is final and not subject to review by any court or agency unless the owner seeks judicial review within sixty days of the mailing of the administrative hearing decision. The regulations to the HDVIP hearing process can be found in the California Code of Regulations, Title 17, Article 5, Sections 60075.1 through 60075.47.

CALIFORNIA AIR RESOURCES BOARD

PERIODIC SMOKE INSPECTION PROGRAM

(PSIP)

I. LEGISLATIVE MANDATE

To complement the effectiveness of the California Air Resources Board's mandate to curtail excessive smoke emissions from heavy-duty diesel vehicles, the California Legislature in 1992 mandated that owners or operators of heavy-duty diesel fleet vehicles perform periodic self inspections. Per Senate Bill (SB) 2330, the ARB was specifically directed to specify the inspection procedures, the inspection frequency, reference emissions standards, and the actions needed to conform to the established requirements.

In concert with the legislative mandate, the ARB consulted with the Bureau of Automotive Repair (BAR), the Inspection and Maintenance Review Committee, and industry representatives in developing the program's regulations. The enacted program is termed the "Periodic Smoke Inspection Program" (PSIP) and applies to California based fleet with two or more vehicles.

II. PSIP NEED

The PSIP is meant to complement the Heavy-Duty Vehicle Inspection Program (HDVIP). Although the HDVIP is effective in reducing excessive smoke emissions from heavy-duty diesel vehicles subject to random roadside locations, it is insufficient on its own to reduce the number of smoking trucks from the thousands of fleet vehicles based in California.

The HDVIP is conducted primarily at key interstate highway inspection stations along with intercity and rural random locations. However, since urban areas such as Los Angeles County are so large, additional strategies are needed in order to address the impact of all intercity vehicles. The PSIP is intended to fill this need by focusing on vehicles such as buses and trucks with more localized operations. In conjunction, both are expected to lower the emissions impact that malmaintained heavy-duty diesel vehicles have on California's air quality.

III. TRUCK EMISSIONS

Even though heavy-duty trucks and buses constitute only 2 percent of the total on-road motor vehicle fleet, they contribute approximately 30% of oxides of nitrogen emissions and 65% of the particulate matter emissions. On average, heavy-duty vehicles emit: 469.21 tpd of oxides of nitrogen (NO_x), 31.05 tpd of particulate matter (PM), 49.32 tons per day (tpd) of reactive organic gases (ROG), and 23.44 tpd of oxides of sulfur (SO_x). They also emit carbon monoxide (CO), carbon dioxide ($C0_2$), and miscellaneous toxic compounds such as benzene, aldehydes, 1.3 butadiene, and xylene.

Although somewhat difficult to quantify directly, excessive smoke emissions from diesel trucks are a major public concern. Not only is excessive smoke emissions an indicator of malmaintenance (which directly leads to incomplete fuel combustion and excessive particulate matter emissions), smoking trucks and buses are a major public health and nuisance concern. Every year government agencies receive thousands of complaints regarding smoking trucks[6].

Engine malmaintenance and tampering are the primary causes of excessive diesel emissions - particularly smoke emissions. Examples of specific components or systems which are malmaintained or tampered are: fuel injection pump and seals, fuel injection timing, fuel injectors, smoke puff limiter, air filter, intercooler, turbocharger, exhaust gas recirculation valve, along with other internal engine components. Other causes of excessive diesel emissions are pressure leaks in the injection system or manifolds, excessive back pressure in the exhaust system, and fuel problems such wrong fuel grade or water contamination.

IV. VEHICLES SUBJECT TO THE PSIP

The PSIP applies to all California based fleets which operate heavy-duty diesel vehicles with a GVWR of 6,001 pounds or more. Typical fleet vehicles include, pick-up trucks, flatbeds, semi-trucks, utility vehicles, vans, transit buses, and school buses.

The PSIP, however, does not apply to single vehicle operations. This qualification is needed in order to provide regulatory relief for economically-marginal small businesses which own a single heavy-duty diesel-powered vehicle. Many of these vehicles are privately owned, lighter duty, and are driven more

[6] Please refer to "Background Information of the Heavy-Duty Vehicle Inspection Program", Section II, of this booklet for a discussion the emissions impact of heavy-duty vehicles on California's public health and environment.

like passenger cars and light-duty trucks[7]. Large fleets, unlike single vehicle operations, can generally perform their own inspections or pool their inspections at common inspection facilities. It is estimated that about 20 percent of heavy-duty diesel vehicles registered in California operate as single (non-fleet) vehicles.

In addition, non-California based interstate vehicles are exempt since they are generally serviced and maintained outside of California. These types of vehicles include vehicles which:

(a) are registered under the International Registration Plan,

(b) operate in California under terms of Interstate Reciprocity Agreements,

(c) operate in California under the terms of any other apportioned registration, reciprocity, or bilateral prorate registration agreements between California and other jurisdictions, or

(d) operate in California under short-term vehicle registrations or permits of 90 days or less are also exempt from the PSIP.

These vehicles are generally in California on a temporary basis only and it would be inappropriate to subject them to the PSIP requirements. All heavy-duty diesel-powered vehicles operating in the state, however, are subject to the ARB's HDVIP. Interstate vehicles may, in fact, be more likely to be subject to a roadside inspection than a vehicle in a California urban fleet, since HDVIP enforcement operations are mostly located at the weigh stations along interstate highways. It is estimated that 19 percent of all heavy-duty vehicles operating in California are based outside California.

V. INSPECTION RESPONSIBILITIES

Section 2192 of Title 13 of the CCR sets forth the necessary vehicle inspection responsibilities to implement an effective PSIP. Owners of vehicles subject to the requirements of the regulations are required to periodically test their vehicles, repair their vehicles if smoke opacity standards are exceeded, re-test their vehicles once repaired, make additional repairs if necessary, record all test results and repair information, maintain records for two years, and permit an ARB inspector to review the inspection records at owner/operator designated fleet locations by appointment.

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[7] It may be more appropriate to inspect these vehicles in the biennial smog check program; to this extent, the Bureau of Automotive Repair is currently studying the feasibility of inspecting diesel vehicles at smog check stations.

A. INSPECTION INTERVALS

The established regulations require an initial "phase-in" inspection period in accordance to the established scheduled. Fleets of five or more vehicles are subject to the following inspection schedule:

* At least 25 percent of the fleet's vehicles within 180 calendar days;

* At least 50 percent of the fleet's vehicles within 270 calendar days;

* At least 75 percent of the fleet's vehicles within 365 calendar days;

* The fleet's remaining vehicles no later than 455 calendar days.

For fleets of 2 or 4 vehicles, at least one vehicle must be tested in the initial 180 day period, and in each subsequent 90 day period, until all vehicles are tested.

These testing intervals are applicable commencing on the effective date of the PSIP regulations (July 1, 1998) or whenever a new fleet becomes operable. Once a vehicle has been inspected, it is required to be tested annually thereafter.

Since it is unlikely that newer (post 1994) model year engines will smoke excessively during the first few years of use, the PSIP regulations allow a four year exemption for vehicles powered by 1994 or subsequent model-year engines. For these vehicles, the testing schedule begins on January 1 of calendar year that is four years after the model year of the engine, and are to be treated as having been acquired by the owner on January 1. For example, a 1995 model-year engine will be exempt until January 1, 1999.

VI. TEST PROCEDURE

Since the PSIP is meant to complement the HDVIP by promoting self compliance to the HDVIP, both employ the same test procedure and pass/fail criteria.

This procedure uses the SAE J1667snap-acceleration test method. During this test the driver rapidly depresses the accelerator to the floorboard for a few seconds while the smoke is measured. A smoke opacity meter monitors the smoke exiting the exhaust pipe.

This test was initially chosen because it is easy, quick and safe to perform and is particularly well suited for inspections at fleet facilities. Please refer to the PSIP testing regulations as contained in Title 13, section 2193 for the specific testing and equipment requirements.

VII. SMOKE OPACITY STANDARDS

A major legislative requirement for both the HDVIP and PSIP is that they be effective in identifying vehicles with excessive smoke emissions without causing any wrongful failures. The established HDVIP smoke opacity standards fulfill this mandate.

The smoke opacity standards are 40% for trucks with 1991 and newer model-year engines and 55% for those with model-year engines older than 1991. These standards are applicable to both the HDVIP and PSIP. Vehicles exceeding these standards will be cited under the HDVIP with one notable exception - for pre 1991 model-year engines a Notice of Violation (NOV) is issued for engines with smoke opacity levels between 55% and 69%[8]. If these vehicle are repaired to below 55% within the allowable 45 day time period, a citation is not issued.

To assure that wrongful failures do not occur under the HDVIP or the PSIP, certain engine families with unique operational characteristics have been granted exemptions from the above standards. Please refer to the attached technical bulletin at end of this summary for a list of exempt engine families and their assigned standards.

VIII. RECORD KEEPING REQUIREMENTS

The need to maintain records of the required inspections is an important element of the PSIP regulations. In particular, the record-keeping requirements allow the ARB to perform proper audits, and will assist the ARB in gathering information on the effectiveness of the program.

Per the PSIP requirements, vehicle owners/fleet operators must document:

* staff or contracted commercial entity responsible for PSIP testing,
* brand and model of the smoke testing equipment employed,
* date of the last smoke meter calibration,
* smoke meter operator,

[8] Under the NOV concept, a citation is issued if the vehicle exhibited smoke emissions are 70% or greater or of the vehicle is not repair to a level below 55% when a NOV is issued.

* specific vehicle identification,

* initial smoke test results and test dates,

* corrected action (i.e. repairs undertaken), if warranted, and

* post-repair smoke test results.

As noted, repair records must be maintained. These include repair receipts from a repair facility or a completed work order (if a fleet conducts its own repairs). Repair records need to also include the following information: name, address, and phone number of the facility conducting the repairs; name of the mechanic; date of repair(s), and/or adjustment(s); and an itemized list of replaced components, including description of replaced components; component part numbers, and cost.

To allow the trucking industry some flexibility, however, the required records may be maintained in any reasonable fashion, including electronic data files or hard copy files.

Please refer to section 2194, Title 13, Health and Safety Code of the enclosed PSIP regulations for a complete list of the record keeping requirements.

IX. PSIP INSPECTION RECORDS AUDITS

To effectively enforce the PSIP, the ARB needs to audit participating fleets. To this extent, the legislature has given the ARB the authority to review a fleet's PSIP record keeping provisions at owner/operator designated fleet locations by appointment.

The ARB presently anticipates conducting audits in conjunction with the CHP's Biennial Inspection of Terminals (BIT) program. The CHP currently administers this safety assurance program for trucks and buses that operate from California fleet facilities. A similar program exists for coach buses. An important feature of these CHP programs is the on-site audit of vehicle safety records. To prevent an undue regulatory burden on the owners and operators of heavy-duty diesel vehicles, the ARB anticipates coordinating its audits of the PSIP records with the CHP's audit of safety records when feasible.

If a fleet owner fails to make available the PSIP records for review or if a review of the records indicate that some vehicles maybe in violation, the ARB may test a fleet's vehicles at its premises. Under the Health and safety Code section 44011.6(f) the ARB can enforce the HDVIP at fleet facilities. Refusal to submit can be considered a HDVIP violation and can lead to the issuance of citations.

ENGINE FAMILY EXEMPTIONS

HDVIP and PSIP

Technical Bulletin
(As of April 22, 1998)

The following is a listing of approved exempted heavy-duty engines pursuant to section 2182(e) of Title 13 California Code of Regulations:

Engines Exempted to Higher Opacity Cutpoints

Manufacturer	No. Of Engine Families	Exempt/App. Opacity	Model Years
DDC (1)	6	75%	1987-90
Hypermax (2)	2	75%	1985-91
Caterpillar (3)	2	70%	1989-90
Cummins (4)	1	75%	1988-92

(1) Series 60 DDEC I and DDEC II engine families. DDC is upgrading these engines, by recalibrating the on-board electronic controls during routine maintenance, to comply with the applicable cutpoint.

(2) This exemption applies to an aftermarket parts turbo-charger installation.

(3) Selected Model 3176 electronic engines.

(4) L-10 engine family-CPL 1226.

For further information, contact the Northern Heavy-Duty Diesel Section office at (916) 322-7061, the Southern Heavy-Duty Diesel Section office at (626) 450-6161, or the Border Heavy-Duty Diesel Section office at (626) 350-6561 of the Air Resources Board.

DATA LOG SHEET SAMPLE

PERIODIC SMOKE INSPECTION PROGRAM (PSIP)

Date _____ Time _____

Test Facility : Facility Name _____

Address _____

_____

Phone _____

Operator Name : Smoke Meter _____

Chart Recorder _____

Throttle _____

	Brand Name	Model	Date of Last Calibration
Smoke Meter :			
Chart Recorder :			

Vehicle : License _____ Engine : Year _____

VIN _____ Make _____

Facility ID _____ Family _____

CPL _____

Smoke Test 1 : Date _____

Zero _____ Span _____ Mid _____

Clean 1 _____ Clean 2 _____ Clean 3 _____

Test 1 _____ Test 2 _____ Test 3 _____

Avg. of 2 Closet Test Readings _____ Standard _____

Test Result : Pass - Fail Repair Needed : Yes - No

Smoke Test 2 : Date _____

Zero _____ Span _____ Mid _____

Clean 1 _____ Clean 2 _____ Clean 3 _____

Test 1 _____ Test 2 _____ Test 3 _____

Avg. of 2 Closet Test Readings _____ Standard _____

Test Result : Pass - Fail Repair Needed : Yes - No

Suggested Format *

CALIFORNIA AIR RESOURCES BOARD

CALIFORNIA COUNCIL ON DIESEL EDUCATION AND TECHNOLOGY

(CCDET)

I. CALIFORNIA COUNCIL ON DIESEL EDUCATION AND TECHNOLOGY BACKGROUND

The California Council on Diesel Education and Technology (CCDET)was formed in the spring of 1992 to assist the trucking and transit industries and related repair industries in complying with the Heavy Duty Vehicle Inspection Program and the Periodic Smoke Inspection Program. The CCDET program is a coalition of government, industry, and academia established to develop and conduct training programs for service and repair personnel in the commercial truck and transit industries. Members of the CCDET program include the ARB and California Community Colleges with Diesel Technology Programs.

The CCDET coalition has selected six California Community Colleges (College of Alameda, San Joaquin Delta College, Golden West College, Los Angeles Trade Tech College, Palomar Community College, and Santa Ana College) to serve as lead institutions in developing the training program in cooperation with other CCDET members. All interested California Community Colleges or Technical Schools with Diesel Technology Programs will be invited to participate.

II. BENEFITS GAINED FROM THE CCDET PROGRAM

The CCDET program will benefit the trucking and transit industries by providing a higher quality of service available to the end users. The maintenance and repair facilities will receive an effective employee who has an understanding of air quality regulations and procedures. The CCDET program provides an enhanced education to the student as well as the community.

CONTACTS FOR THE CCDET PROGRAM

College of Alameda
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Michael Cavanaugh

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Joe Schaeffer

Santa Ana College
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Santa Ana, CA 92706-9979
(714) 564-6661
(714) 564-6158 FAX
Hogue_tom@rsccd.org
Tom Hogue

CALIFORNIA AIR RESOURCES BOARD

TELEPHONE CONTACT LIST

For information regarding the Heavy Duty Vehicle Inspection Program or the Periodic Smoke Inspection Program you may contact any of the following:

Air Resources Board Heavy-Duty Diesel Branch Northern Heavy-Duty Diesel Section	(916) 322-7061
Air Resources Board Heavy-Duty Diesel Branch Southern Heavy-Duty Diesel Section	(626) 450-6161
Air Resources Board Heavy-Duty Diesel Branch Border Heavy-Duty Diesel Section	(626) 350-6561
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Renae Hankins, Air Polluiton Specialist Northern Heavy-Duty Diesel Section rhankins@arb.ca.gov	(916) 322-8275
Hortencia Mora, Air Pollution Specialist Southern Heavy-Duty Diesel Section hmora@arb.ca.gov	(626) 350-6590
Michele Burns, Air Pollution Specialist Southern Heavy-Duty Diesel Section mburns@arb.ca.gov	(626) 350-6490
Debra Wiemer Air Resources Technician II Southern Heavy-Duty Diesel Section dwiemer@arb.ca.gov	(626) 450-6161
Gretchen Ratliff Air Pollution Specialist Border Heavy-Duty Diesel Section gratliff@arb.ca.gov	(626) 350-6561
Air Resources Board P.O. Box 2815 Sacramento, CA 95812 http://www.arb.ca.gov	(800) 242-4450
Air Resources Board 9480 Telstar Avenue #4 El Monte, CA 91731-2988 http://www.arb.ca.gov	(626) 450-6161 (626) 350-6561

To obtain this document in alternative format, please contact the Air Resources Board ADA Coordinator at (916) 322-4505, TDD (916) 324-9531, or (800) 700-8326 for TDD calls from outside the Sacramento area.

Thank you

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